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Vol. 86 Washington : 1939 No. 3054

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TWO NEW OPHIURANS FROM THE SMITHSONIAN-HARTFORD EXPEDITION, 1937

By Hubert Lyman Clark

New echinoderms from the shallow waters of the West Indies are still to be expected, but it is probable that our knowledge of the littoral forms will not require the addition of many new names to the list. It was therefore a great surprise to find that each of two specimens, kindly sent to me for examination by Austin H. Clark, of the U. S. National Museum, proves to represent an undescribed species. Each, moreover, is a representative of one of those large and heterogeneous genera our knowledge of which is too superficial or fragmentary to permit its dismemberment into smaller and more natural groups.

It is always regrettable to describe a new species from a unique specimen and never more so than in such genera, but on the other hand such unique specimens must have names assigned to them if they are to be of any value in extending our knowledge of those genera. This is the only justification for publishing the following descriptions.

I wish to thank Mr. Clark for his generous kindness in permitting me to examine and describe these interesting novelties.

Genus OPHIACTIS Lütken

OPHIACTIS NOTABILIS, new species

PLATE 52, FIGURES 1, 2

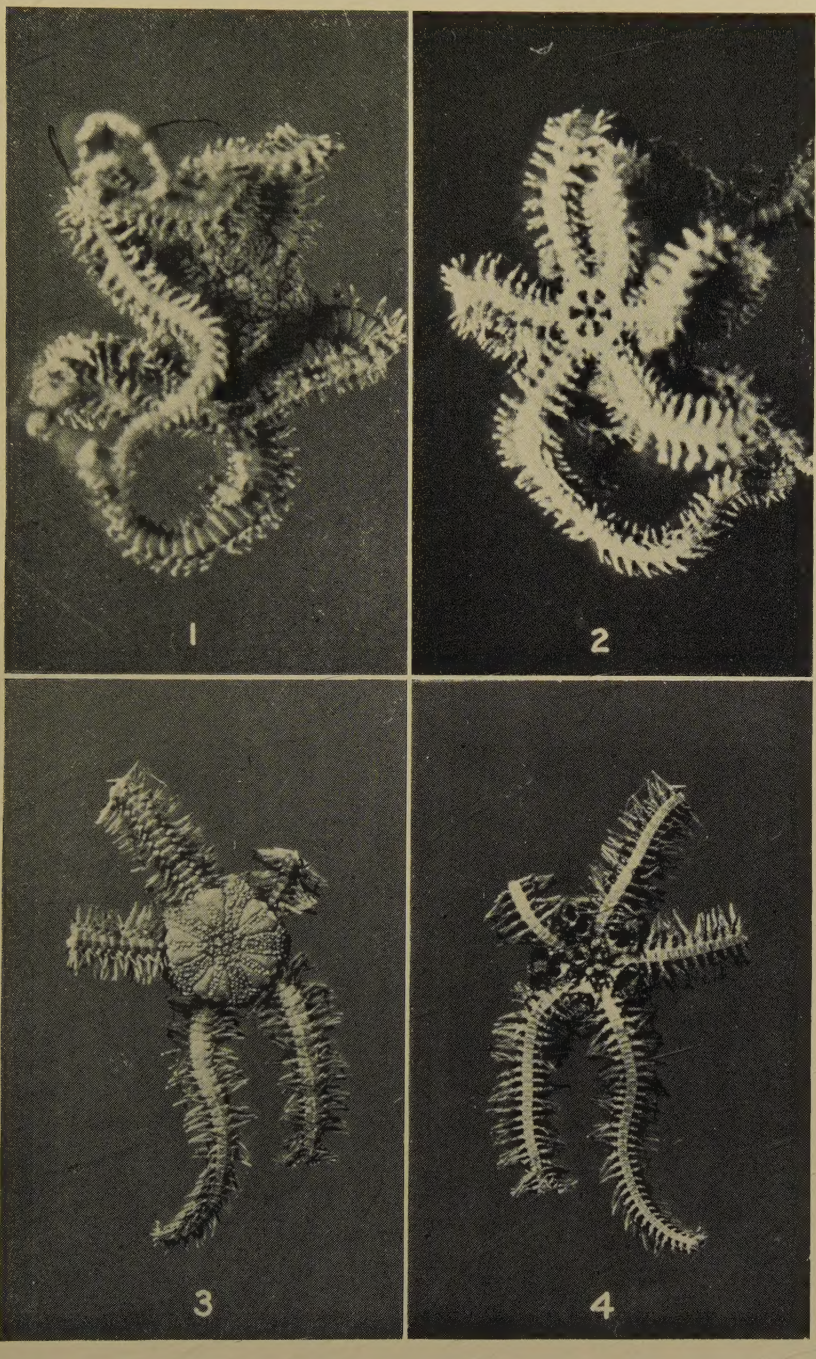
Description.—Disk very nearly 5 mm in diameter, hexamerous, slightly puffed out in the interradii and somewhat elevated, though irregularly, on the upper surface. The disk covering consists of

oval or circular, flat or slightly convex scales, scarcely or not at all overlapping, and 6 pairs of radial shields, which are flat and very small, but little larger than the largest of the disk scales; the two radial shields of each pair are separated from each other or are barely in contact distally. The interbrachial areas below are covered near the margin with thin, flat, rounded scales, like those of the upper surface but much more evidently overlapping; toward the mouth the scales are lacking and only a thin dark skin covers the area near the oral shields; there are no granules or spinelets on the disk, either above or below.

Arms 6, rather short, less than 15 mm long, slender at tip. Upper arm plates at base of arm at least twice as wide as long, very completely in contact but the proximal side is not quite so long as the distal; the lateral margins are very evenly rounded, with no hint of angles; near the tip of the arm the plates are much smaller and more nearly separated from each other, the proximal side having become a more or less truncated point, the general form of the plate being triangular.

Oral shields small, somewhat elliptical, wider than long, not so large as the first under arm plate. Adoral plates relatively very large, narrow and truncate in front of the oral shield, where they are in contact, much wider, and rounded, radially, where they meet and almost overlap in front of the first under arm plate. It is possible that these wide ends cover over and conceal the true first under arm plate and that the apparent first under arm plate is really the second. Oral papilla single, located on the small narrow oral plate; it is about twice as high as wide, flattened, and truncate or bluntly pointed at tip; apparently it is easily knocked off for several appear to be wanting; on only one jaw is the papilla present on both sides. Under arm plates, except the apparent first, which is smallest and evidently wider than long, squarish with rounded corners; the distal end is a trifle wider than the proximal and its margin is very slightly convex; lateral margins a very little concave; at the tip of the arm the plates are much longer than wide; they are more or less fully in contact throughout. Side arm plates low and small, meeting above near tip of arm, but not below; each carries a series of 4 arm spines, of which the uppermost and lowest are smallest and subequal; the other two are also subequal, but noticeably longer, about equaling the width of the arm; all the spines are blunt and obviously thicker at base than near tip; compared to the arm spines of *O. savignyi* they could be called slender. Tentacle scale single, flat, rounded, and relatively large, as usual in the genus.

Color of dry specimen very pale gray above, with a slight yellowish tinge, cream white below; a dusky blotch is visible on the upper side of most of the larger arm spines.



TWO NEW OPHIURANS.

1, 2. *Ophiactis notabilis:* Aboral (1) and oral (2) sides. ×4½.
3, 4. *Ophiothrix platyactis:* Aboral (3) and oral (4) sides. ×2½.

Holotype.—Station 19; Puerto Rico; off Puntilla Point, parallel to Tablazo Shoal; 3½ fathoms; broken shell, broken coral, and mud; W. L. Schmitt, March 29, 1937 (U.S.N.M. no. E. 5590).

Remarks.—This little *Ophiactis* is quite different from any known West Indian species. The disk covering may owe its peculiarities to being regenerated, though the appearance of the basal upper arm plates does not support such a hypothesis. But the oral papillae are very distinctive, and the color, the arm plates, and the arm spines, taken in connection with the number of arms, give this *Ophiactis* a status quite apart from any other species now known.

Genus OPHIOTHRIX Müller and Troschel

OPHIOTHRIX PLATYACTIS, new species

PLATE 52, FIGURES 3, 4

Description.—Disk 6 mm in diameter, quite flat, covered by relatively few scales and the 5 pairs of radial shields; the latter are large, triangular, 2 mm long and 1 mm wide distally, sharply pointed at inner end; in each pair the shields are markedly separated from each other, except at the distal inner corner where they may touch; the surface of each shield is bare and smooth except for the presence of 2 to 5 minute irregularly scattered rounded granules. Disk scales comparatively few, coarse and thick, not well defined; each scale carries 1 to 5 rounded granules much larger than those on the radial shields; at the interbrachial margins these granules are higher than thick and might be called low spinelets. Interbrachial areas below covered with thin overlapping scales, much more delicate than those of the upper surface; near the margin of each area are a very few low blunt spinelets.

Arms 5, short and flat, probably less than 30 mm in length, wide at base but slender at tip. Upper arm plates much wider than long, more or less triangular with all angles rounded; the basal plates have the proximal angle truncated, as they are obviously in contact with each other, but this proximal margin is not half so long as the distal, which is twice the plate length or even more and straight or flattened-convex; the surface of the plates is very finely roughened, not nearly so coarse, however, as to be called shagreenlike.

Oral shields much wider than long, with a small blunt proximal angle, a nearly straight distal margin, and rounded lateral ends. Adoral plates short and wide, in contact interradially and closely appressed to the proximal margin of the oral shield. No oral papillae, of course; the cluster of tooth papillae conspicuous as usual, but not peculiar. Under arm plates quadrilateral, the length and breadth about equal or, near base of arms, the breadth a little greater; distal margin notably concave; proximal a trifle convex or with a low

rounded median projection; all four corners rounded; the plates are more or less in contact at the sides but not in the median line. Side arm plates low, not meeting distinctly either above or below; each carries a series of 6 to 8 slender, blunt, somewhat flattened arm spines, which are conspicuously thorny, at least along the sides; the uppermost spine is very small, but sharp and thorny; the second is more than twice as long, the third is much longer still, and either it or the fourth is the longest of the series, the length exceeding the width of the arm; succeeding spines are shorter and more slender, the lowest one or two (sometimes three) being notably slender, more or less smooth except at tip, and blunt. Tentacle scale minute, flat and rounded.

Color of dry specimen pale gray on disk and upper arm plates, the disk granules somewhat lighter; at base of arm the middle of each upper arm plate is very slightly lighter than the sides and one can almost detect a wide whitish longitudinal line thus marking the upper surface of the arm. But this is to be detected only in the best light; farther out on the arm each plate has a faint ill-defined whitish area at center and on a few plates this has the shape of an hourglass; there are no dark lines or markings on the upper surface of either disk or arms. Arm spines glassy at base but becoming distinctly pink at the tips. Oral surface nearly white, but the interbrachial areas are gray and the under arm plates and the spines have more or less of a pinkish tinge.

Holotype.—Station 56; Barbados; Pelican Island, Carlisle Bay; cracked from old blocks of coral; W. L. Schmitt, April 19, 1937 (U.S.N.M. no. E. 5591).

Remarks.—This curious little *Ophiothrix* was first recorded by Austin H. Clark (1921, Univ. Iowa Studies in Nat. Hist., vol. 9, no. 5, p. 54) under the name of *Ophiothrix lineata.* In 1933 (Handbook of Littoral Echinoderms of West Indies, p. 62) I made the futile suggestion, based on the locality and habitat, that the specimen "must be a peculiar individual" of *O. suensonii.* I was much farther from the truth than my colleague, for there is no doubt that *platyactis* is much nearer to *lineata* than it is to *suensonii.* It is readily distinguished from all its West Indian congeners by the disk covering, the upper arm plates, the arm spines, and the coloration. The shape of the upper arm plates and spines and the absence of dark lines on the upper side of the arms separate it sharply from *lineata* and even more readily from *suensonii*, which it does not resemble at all.

U. S. GOVERNMENT PRINTING OFFICE: 1939